



Space Exploration: Keeping Shuttle Workers at KSC Healthy

USA Safety & Health, FL



- **Houston, TX**
- **Limited Liability Company (1996)**
 - **The BOEING Company**
 - **Lockheed Martin Corporation**



Florida

Regulatory Emphasis!

- American with Disabilities Act (1990)
- NIOSH Lifting Guidelines (1994)
- **FPP-E-02-20** Ergonomics (02/05/2002)
- Ergonomics Management Program – **USA003698** (07/24/2004)
- OSHA Ergonomic Guidelines (2002)

As OSHA VPP Star Members, it is our responsibility to go **ABOVE AND BEYOND** of what is expected in normal industry.



OPERATING PROCEDURE

TITLE:	ERGONOMIC MANAGEMENT PROGRAM	No.:	USA003698
		Rev.:	2
POLICYMAKER:	USA ENVIRONMENTAL SAFETY AND	Date:	Draft 07/22/04
	HEALTH	Page:	1 of 8

1. PURPOSE AND SCOPE

This procedure defines the responsibilities and functions of the United Space Alliance (USA) Ergonomic Management Program and complies with Functional Policy and Procedure (FPP) E-02-20. This program will focus on reducing the number and severity of work-related musculoskeletal disorders (WRMSDs) caused by exposure to ergonomic risk factors in both the office and industrial workplace. This procedure will aid in establishing ergonomic control measures to reduce or eliminate employee exposure to and enhance recognition of ergonomic hazards that can lead to injury or illness.

2. APPLICABILITY

This procedure is applicable to USA Florida personnel, other USA personnel with Florida duty assignments, and USA subcontractors at Kennedy Space Center (KSC), Cape Canaveral Air Force Station (CCAFS), Titusville Office Complex, and NASA Shuttle Logistics Depot (NSLD).

3. REQUIREMENTS

3.1 GENERAL

The Ergonomic Management Program is a systematic process for anticipating, identifying, analyzing, and controlling WRMSDs and consists of the following six major elements:

- a. Management leadership
- b. Employee participation
- c. Ergonomics survey (hazard identification and information)

Florida Employee Distribution

- **Approximately –**
 - **3500 employees OFFICE environment**
 - **2500 employees SHOP environment**

Florida Employee Locations

- **Titusville Office**
- **NASA Shuttle Logistics Depot (NSLD)**
- **KSC**
 - **Industrial Complex**
 - **Complex 39**
- **Cape Canaveral AFS**



Ergonomics Website

USA Ergonomics

[Ergonomics Home](#)[Office of Horrors](#)[Ideal Office](#)[Symptoms](#)[Workstation Setup](#)[Stretches](#)[Laptops](#)

USA Ergonomics

Chair Adjustments - **NEW!**

Industrial / Shop Ergonomics

ES&H Florida Ergonomic Program

Request an Ergonomic Assessment

Ergonomics Around the Clock

Frequently Asked Questions

Your Ergo Specialists

Additional Links

[Ergonomic CBT](#) ■ [Ergo Smart](#) ■ [Ergonomic Brochure](#)

A Message from your
Ergonomic
Specialists:

We all spend a lot of time on the computer. Few people realize how strenuous computer work is for our body and how large its impact is on our physical and mental well-being. The first rule of thumb is to sit correctly while working. Good posture is very important, whether you're standing or sitting.

Whatever you choose to do, just DO IT!

TIP OF THE WEEK

Arms should be close to the body

Curator: [Wendy O'Malley](#)

RDM: [Chuck Gibson](#)

CBT Ergonomics:

Lesson Objectives

Office Ergonomics

RISK FACTORS

In this lesson, Risk Factors, you will learn about the contributing causes of musculoskeletal injuries in the office environment. After going through this lesson, you should be able to:

- Explain what is a risk factor
- Identify the common risk factors and provide examples of each
- Understand what factors affect your degree of risk
- Explain what is a control measure and identify examples of work practice and engineering controls.



Section 1 of 4, Page 1 of 9

Continue

Contact: [James Taylor](#)

Curator: [Training & Development](#)

RDM: [James Taylor](#)

Ergonomic Requests

- **Online Request**
- **Direct E-mail**
- **Occupational Health Facility (OHF)**
- **USA Nurse**

Request



Assessment

[Ergonomics Home](#)[Office of Horrors](#)[Ideal Office](#)[Symptoms](#)[Workstation Setup](#)[Stretches](#)[Laptops](#)

Where are you?



Alabama Employees: Click on the Alabama logo on the left and fill out the Office Evaluation Form electronically and "Forward" it via email to "Rhonda Mann". This will help expedite the evaluation process. Complete the header and the Evaluation section and include any comments you might have concerning your present computer workstation set-up. The form is designed to help you identify areas of your computer workstation configuration that can be improved so we may make the necessary adjustments to allow you to work more comfortably with your PC.



Florida Employees: Click on the Florida logo on the left and fill out the online Request For Services (RFS) for Ergonomic Solutions.



Texas Employees: Click on the Texas logo on the left and fill out the online Request For Services (RFS) for Ergonomic Solutions.

Curator: [Wendy O'Malley](#)

RDM: [Chuck Gibson](#)



USA - INFORMATION MANAGEMENT

Ergonomic Assessment Request

[Request
Services](#)

Florida users submit on-line request below or call Ergonomic Specialist Esau Perez 321-861-6288

This on-line submittal is for Ergonomic workstation assessments only
For further Ergonomic information refer to [USA Ergonomics Program Website](#)

Select different user

if you are submitting this form for someone else.

Esau Perez

Reports To: Donald A Paniale

esau.perez@usa-spaceops.com

donald.a.paniale@usa-spaceops.com

321/861-6288 Phone

321/861-

USAFL\PEREZE Domain\UserID

024311 USA Employee ID

0314321 Department

User Location... (Please edit default location information if incorrect for this request.) [Restore Defaults](#)

Site

Building

Floor

Room/Grid/Coordinates

CPU Property Tag Number...

Click [here](#) to auto-fill name of THIS workstation

ITR Name/Number...[\(Who is my ITR?\)](#)

Describe the level of discomfort...

General Comments...

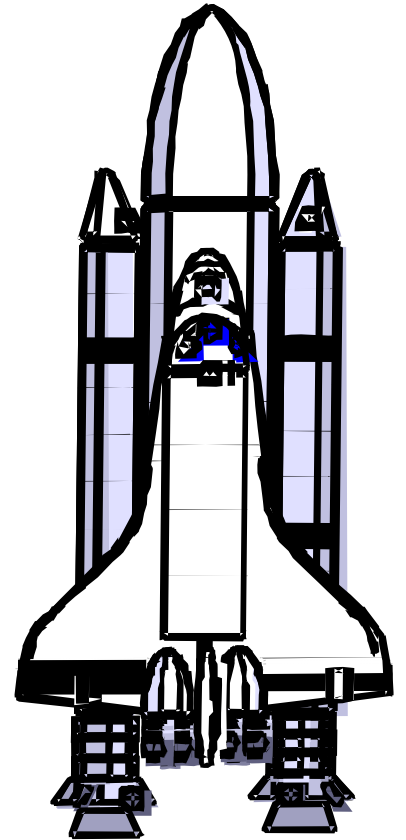
(Click Submit button to forward for processing)

Note - All Fields must be completed for request to be processed

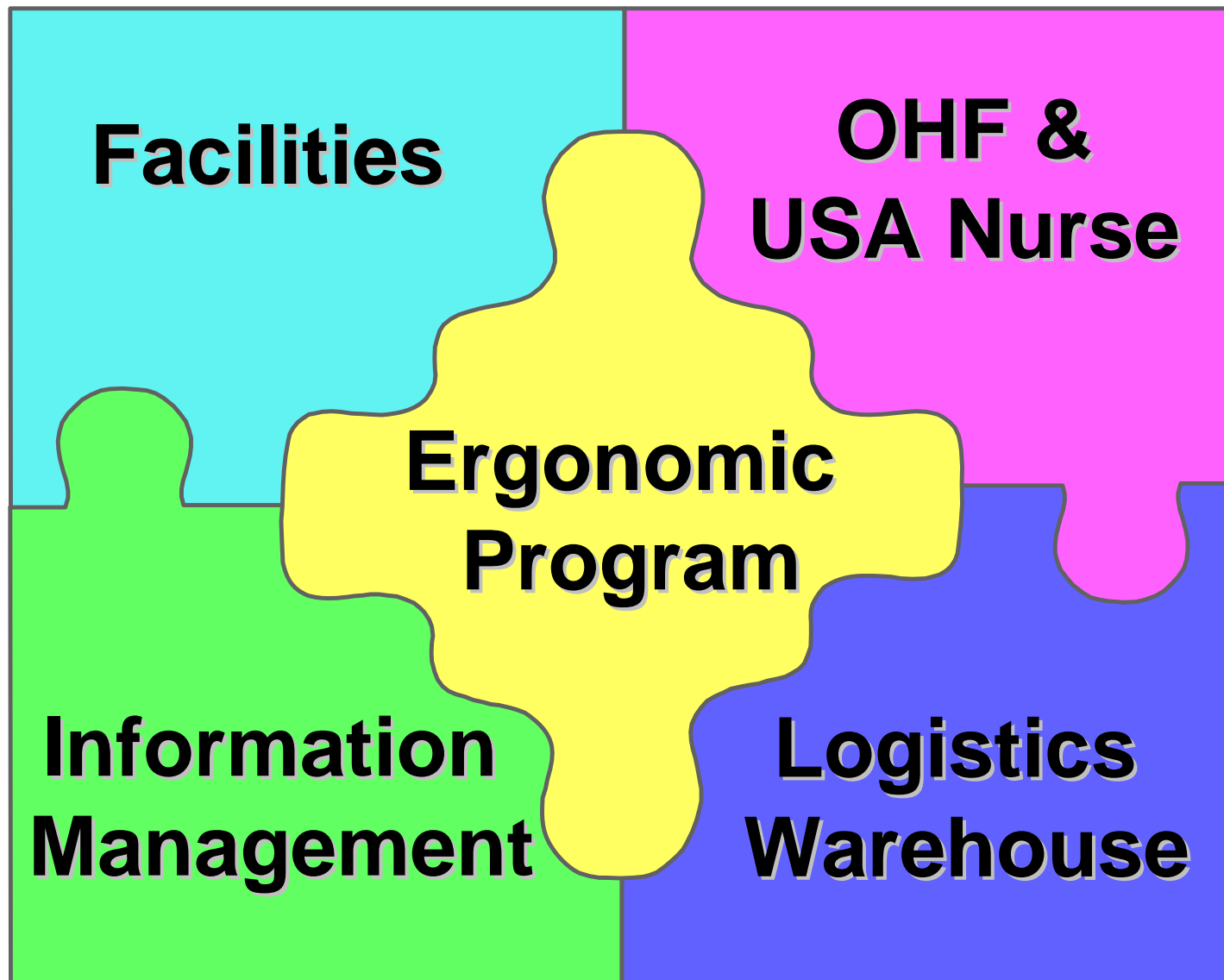
Estimated Time To Complete = Varies (depending on requirements)

Ergonomic Evaluation

- **Schedule time with employee**
- **Visit with employee**
- **Identify ergonomic risk factors**
 - **Excessive force**
 - **Awkward Posture**
 - **Repetitive Motions**
 - **Environment**
 - **Noise**
 - **Lighting**
 - **Vibration**
 - **Temperature**



Ergonomic Support



OHF / USA Nurse

- **Contact case management**
- **Identify employees**
- **Reactive**
- **Close monitoring**

Facilities

- **Install/Remove keyboard trays**
- **Order/Deliver ergonomic chairs**
- **Raise/Lower desk shelves**
- **Reconfigure furniture**
- **Install lighting fixtures**
- **Adjust overhead lighting**

Logistics Warehouse

- **Order/Stock Ergonomic Equipment**
 - **Split keyboard wrist rest**
 - **Keyboard/Mouse gel wrist rest**
 - **Mouse gel wrist rest**
 - **Monitor risers**
 - **Document holders**
 - **Anti-glare screens**
 - **Lumbar support cushions**

Information Management

- **Load work-pacing software**
- **Distribute split keyboards**
- **Alternate pointing devices**
- **LCD screens**

Environment

- **Public Announcements**
- **Pager/E-mail notifications**
 - **Heat Strain Index**
 - **Wind Chill Factor**
- **Monitoring**
 - **Noise surveys**
 - **Lighting measurements**
 - **Heat Stress**

KSC-01PP-0906



Industrial Ergonomics

- **Industrial/Human Engineering**
 - **Stands**
 - **Orbiter door**
- **Review work documents**
- **Walkthroughs**
- **Case management (reactive)**
- **CHS contractor support**

KSC-03PD-3215






Empower

- **Safety Committees (VPP Star)**
 - **Every employee covered**
- **Staff Meetings**
- **Management**
- **Safety Advocates**
- **Proactive**



Ergonomic Involvement in Design?

Stage	Cost
Drawing, Planning, Design	
Construction, Development	
Post-Design, Retro-fit, Modify	

The sooner the issue is detected the cheaper it is going to be to address it.

Who needs to be empowered?

EVERYONE!!!

“If you have knowledge, let others light their candles with it.”

--Sir Winston Churchill

KSC Ergonomic Working Group:

- **Ergonomics Representatives from:**
 - **NASA**
 - **Comprehensive Health Services (CHS)**
 - **The BOEING Company**
 - **Rocketdyne**
 - **RehabWorks**
 - **Space Gateway Support (SGS)**
 - **Dynamac Corp.**

KSC Ergonomic Working Group:

- **Lessons learned**
- **Source of information**
- **Share material**
- **Invite product representatives**
- **Support activities**



Unique Situations

- **National Asset**
- **Return to Flight**

KSC-02PD-1804



KSC-00PP-0360



Unique Situations



KSC-82PC-1325

Errors are Costly



KSC-03PD-1673

Errors are Costly



KSC-02PD-1925

Synergy

- **Situational awareness**
- **Reduce ergonomic risk**
- **Employees empowered**



Employees' Rights



- **Concerns**
- **Bad feeling**
- **Inadequate tooling**
- **Potential for injury**
- **Impact to mission**

Common Goal

**NASA
&
Contractors
have
the Same GOAL**



Questions:

